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SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB
SPRING 2005



Shortia galacifolia

Oconee Bells

WESTERN CAROLINA BOTANICAL CLUB

President: Bonnie Arbuckle
Vice President: Helen Smith
Co-Secretaries: Juanita Lambert
Connie Updike

Treasurer: Larry Avery
Recorder: Ken Borgfeldt
Historian: Suzanne Huie

From the Vice President.....Helen Smith

Weymouth Woods Sandhills Nature Preserve, Southern Pines, NC will be the destination for our WCBC Spring Trip, April 4-6, 2005. The Sandhills region is characterized by a series of flat-topped sandy ridges and relatively broad, flat valleys. This area is the habitat for the longleaf Pine Forests known as the "Pine barrens". The region is anything but barren! More than 500 species are present in the Weymouth Preserve. A rich diversity of small plants ranging from lichens, mushrooms, mosses and ferns, grasses, wildflowers and woody shrubs nestles beneath the forest understory. February to November the park blooms with a diversity of flowering plants---some spectacular and some loved only by specialists. Species include, wild orchids, Indian pipe, dwarf locust, trailing arbutus, birdfoot violet, wild azaleas, dwarf iris, sundial lupine, pine barrens gentian, asters, Sandhills pixie moss, and the purple pitcher plant which grows in Bower's Bog and James Creek.

For the birdwatchers in the group Weymouth Woods is haven to more than 160 bird species including the endangered Red cockaded woodpeckers, pine warblers, Bachman's sparrow, and brown-headed nuthatches. If we are lucky we should see summer tanager, great crested flycatcher, prairie warbler and Kentucky warbler nesting. The great horned owl, barred owl and screech owl also live in the forest of the preserve. There is a bird banding program at the preserve.

This diverse 676 acre preserve is home to many species of amphibians, including the rare pine barrens tree frog, reptiles, mammals, along with a good variety of butterflies and dragonflies. Scott Hartley, one of the preserve's Naturalists will be with us while we are there. The tentative schedule is as follows:

Monday, April 4, 2005 -- Arrive in time to check in at your hotel, relax and have dinner. At 7 pm there will be a welcome and program with Scott Hartley at Weymouth Woods Sandhills Preserve.

Tuesday, April 5, 2005 -- 9:00 AM -- 12 Noon - Walk and program with Scott Hartley
12 -- 1 PM Lunch on your own. 1 PM -- 4 PM - Walk and program with Scott Hartley
Dinner -- Evening to be decided

Wednesday, April 6, 2005 -- 9:00 AM -- 12 Noon -Walk and program with Preserve Ranger. 12 Noon - Lunch. After lunch members may explore the area on their own or start home. Accommodations will be at the Holiday Inn or Hampton Inn in Southern Pines. Call Jeanne Smith (885-2530) for reservation information. Members are responsible for making their own reservations.

Cover: The flower on the cover is *Shortia galacifolia*, Oconee Bells. Our newsletter is named for this southern endemic which is now rare in the wild.

New Members

Bob and Kathy Bachand. The Bachands moved here this last summer after 10 years in Florida. Bob's career was in education; Kathy was a nurse. They are interested in hiking and nature and Bob hopes to pursue his interest in photography during our field trips.

Bill and Anne Dice. Originally from Connecticut, they moved to Hendersonville from Illinois. Both have already been on some of our fall field trips. Bill is doing woodworking here and Anne is active with a book club, Bible study group and Welcome Wagon.

Dianne Hawkins. Dianne has led hikes for the Asheville Recreation Department, the Carolina Mountain Club and the Sierra Club for the last eleven years. She is now a retired state employee and wants to take time to learn about plants and flowers.

Member News

Dues. If you have not renewed your membership, this will be your last issue of Shortia. The membership dues of \$15 a year can still be sent to: Larry Avery, 4 Windrush Woods Lane, Flat Rock, N.C. 28731

Indoor Meetings. When the Henderson County Schools are closed, the Sammy Williams Senior Center will also be closed, and our indoor program for that day will be cancelled.

Annual Symposium -- April 22-24

The 2005 South Carolina Native Plant Society will hold its annual symposium at the Riverbanks Zoo and Botanical Garden in Columbia, S.C. from April 22 to April 24. This year's theme will be "The River in the City: Plant, Animal and Human Interactions in the Midlands of South Carolina".

Speakers, workshops and field trips will address the biology of native plant species, natural areas, and the vegetation of the Midlands. Local and national experts will cover a wide range of environmental topics on citizenship and ecosystem management, the history and role of fire in South Carolina forests and grasslands, and the importance of pollination biology in plant conservation. Field trips will highlight significant natural areas in or near Columbia's major river drainages.

A brochure will be mailed to members late in February. For additional details, including registration information, write : SCNPS, PO Box 2293, Columbia, S.C. 29202 or e-mail <symposium_2005@scnps.org> or visit SCNPS web site at www.scnps.org/symposium.html.

Botanical club members have attended SCNPS symposiums in the past, and have found them well organized, informative and fun!

We had a very successful field trip season in 2004. We completed 34 outings with few cancelations. This was noteworthy what with the busy hurricane season that we experienced. In addition to visiting some of our favorite wildflower spots, we walked two new locations.

We spent the day with Tom Goforth at **Panther Creek**, a location just over the South Carolina - Georgia border where we waded the creek to get to a rich forest full of a wide variety of ferns. The fact that we followed a stream bed most of the way made it quite different from our "normal" walk conditions.

The second new location that we visited was the **Kellog Center**. Most of us driving through that section of Henderson County see the signs and wonder - "what is that all about?". We found a very nice trail with a wide variety of plants. It was decided that the Kellog Center would provide a good focus site for the 2005 field trip season

We had a special focus location for 2004 - **Bullington Center**. We visited there once each month through the field trip season. In addition to checklisting the plants that were found, members brought native plants from their homes for transplanting to areas at the Center. Other times certain areas were weeded to open up the understory for better wildflower growth and to improve the appearance of the trails. The last checklist used was a compilation of the data from the previous visits so we could see the progressive growing season for each of the species.

This was my first year keeping the Recorder "books". It was quite an experience. Fortunately Betty Jones, my predecessor, turned over a very complete system for data entry and cataloging the results of each walk. I had a few questions during the year about such things as "have we ever seen plant X" or "where did we find plant Y". I thought this might be a good time to let you know a little more about the data that is available to anyone for the asking. The recorder information for each walk is entered into what is called a relational database . The information includes the field trip location, date, the plants identified by common name, scientific name and plant family, as well as condition of the plant (coming, going, in bloom, seed, etc.). This data has been entered for all field trips as far back as we have kept records. I'm sure some might have been missed but the information is very complete. Using the database, we can generate all kinds of interesting information such as:

What plants were blooming in a specific month - you pick the month.

Where were all the locations that we found plant X and when did we find it.

What was in seed during a specific month - again you pick the month

These are just a few questions that the database can answer. I invite anyone who has an interest or a specific question to contact me by phone or email and I will be glad to work with you to get the answers if they are accessible from our walk information. A lot of effort goes into checklisting each field trip and entering the data. It would be wonderful if we can get some use from the data.

Now we look forward to 2005 and what I am sure will be another plant filled experience for us all.

I have been asked on occasion for the Internet addresses for web sites which provide botanical information. Here is a list of some of the sites I have found while looking for the name of that elusive flower that I photographed.

Integrated Taxonomic Information System (ITIS). The site we use to obtain the official scientific name for our database. <http://www.itis.usda.gov/>

Plants Database. The USDA web site provides lots of information including photos and line drawings. <http://plants.usda.gov/>

Connecticut Botanical Society. The web page of the Botanical Society that includes good photos of flowers and in some cases leaves for loads of plants, many found in this area. <http://www.ct-botanical-society.org/index.html>

Flowering and Non Flowering Plants of Missouri. Plants are categorized by flower color and/or leaf characteristics and include many species found in our area. <http://www.missouriplants.com/>

Ken's Outdoor Experiences. The above are my favorites for finding answers to "What is it called?" but I also recommend this one to keep up with club walks. I'll post my full list of Botany web links there. <http://home.mchsi.com/~kenborg/home.html>

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Additional Web Sites

The Botanic Gardens Conservation International (BGCI). This is part of an effort to identify plant species grown in the world's botanic gardens. By September 2004 over 90,000 taxa have been covered. Over 9000 of these are known to be rare or endangered. The BGCI website is www.bgci.org.

At this site if you type in a plant name, you will see the number of gardens holding the plant. The database does not reveal the names of the gardens holding each plant. Instead it offers the user a "blind e-mail system" in which he or she can send a message to any garden recorded as holding that species. The sender will not know which garden receives the message and each garden decides whether or not to respond. This protects information about the location of rare and possibly valuable plants from going into the public domain.

There are also links to other web sites and to Google's image service which seems to find pictures on the Web for a surprisingly large number of the species

Nature Serve. A wealth of information about what is going on in the conservation world. Click on "local programs" to find out about state and Canadian nature organizations and see the home page headlines for current news. www.natureserve.org/

-the editor

SCIENCE IN THE NEWS

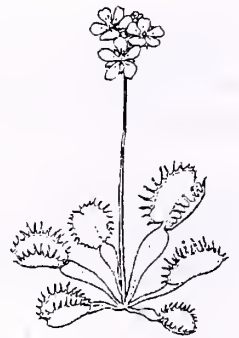
Nobel Peace Prize

For the first time ever, an environmental activist has received the Nobel Peace Prize. Dr. Wangari Maathai was awarded the 2004 prize for her work in Kenya. Horrified at the loss of forests and the consequent damage to the environment and the lives of local people, she founded the Green Belt Movement. This was a grassroots campaign mostly involving rural women who have now planted over 30 million trees during the last 25 years. She is also the first African woman to receive this prestigious Swedish prize.

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Researchers Explore Mystery, and Say “Gotcha”

At least since Charles Darwin, scientists have been puzzled by the carnivorous plant, the Venus Flytrap (*Dionaea muscipula*) which can close its fanged leaves on an insect in a fraction of a second – without any muscle. Using a high speed video camera and computer modeling, a team of scientists led by a Harvard mathematician found that the flytrap employs an ingenious trick of slowly building up elastic pressure in its leaves, like the stretching of a rubber band. It can then snap at the slightest provocation. The Venus Flytrap drawing is by Dick Smith from his book Wild Plants of America.



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Botanical Magazines

Wildflower, North America's Magazine of Wild Flora, ceased publication with the winter-spring 2004 issue. The announcement was made this December by James Hodgins, the magazine editor for more than 20 years. The decision was made primarily because of the rising costs of printing and mailing. Hodgins wrote, “All solutions to remedy this situation would have resulted in a higher subscription cost or a lesser Wildflower. Neither of these options were acceptable to Zil (Art director Zil Zichamis) or myself.” Three native plant organizations are currently considering the feasibility of taking on publication.

The publication of Plant Talk, the magazine supporting plant conservation worldwide, has been taken over by a consortium of six supporting organizations including the Royal Botanic Gardens, Kew; and the Department of Botany of the Natural History Museum of the Smithsonian Institution, and the US Botanic Garden. Since current subscriptions do not cover the publication costs, an injection of funds and a marketing effort to increase the number of subscribers will, we hope, make it possible to continue Plant Talk publication.

Signs of Spring

Alnus serrulata, Common or Tag Alder, is a thicket-forming shrub 5-15 feet high. It grows along streams or in wet places. The staminate-bearing flowers are in drooping catkins; the pistil bearing ones are in much smaller catkins. Both are fully developed before the plant loses its leaves in the fall. Because the flowers begin blooming late in February, here is a plant to watch these cold days. If you are lucky enough to find these on your daily walk, watch for the staminate bearing catkins to begin to elongate and turn yellow as the pollen forms. This is a sure sign, spring is coming. Common Alder is not only an interesting shrub to watch, it has also long been a plant used to control stream erosion.



“Color-Canopy” Zone Concept

On May 15, 2003, the North Carolina Department of Transportation (NCDOT) embarked on a rights-of-way project which accomplishes several goals including the use of native grasses and forbs. The working title for this project is “Color-Canopy”.

“Color-Canopy” is defined as a zone of varying widths located behind the “clean-up” mowing limits. It will combine colorful low-growing trees and native plants within an area that is managed to control undesirable species.

One of the Department's primary goals is to find a viable solution to the encroachment of over-story trees that shade the roadway and tend to fall into the roads as a result of severe weather. At the same time, the color-canopy transition zone will be both environmentally sustainable and aesthetically pleasing.

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Books

Gary Kauffman, who gave an indoor program on “Grasses, Sedges and Rushes” on February 11, will follow this up with a field trip to Kanuga Conference Center on Friday, June 7th. Two books he recommended are:

How to Identify Grasses and Grasslike Plants; Sedges and Rushes
by N.D. Harrington

and

Agnes Chase's First Book of Grasses: The Structure of Grasses Explained for Beginners
(A Smithsonian publication)

The North Carolina Plant Society

The North Carolina Wild Flower Preservation Society was established in 1951 and has served for the last 53 years to keep us informed about wildflowers in our state. At their fall 2004 meeting they made an important decision to change their name to the North Carolina Plant Society (NCPS). The new name expands their interest and activities to promote and enjoy all of North Carolina's native plants. This will include all of the state's native flora including flowering trees, grasses, rushes and the rich world of non-flowering plants such as mosses, liverworts, ferns and fern allies and gymnosperms.

In wild flower the journal of the NCPS, President Alice Zawadzki writes. "Our new name emphasizes to the public the importance of 'native plants', the need for their protection and the conservation of their habitats and the challenges of the new millennium on protected areas brought on by the introduction of invasive alien plant and animal species..."

Besides the journal which is published twice a year, there is also an annual pilgrimage available to members. For more information go to www.ncwildflowers.org. Membership is \$25 annually for individuals and \$35 for a family. Click on "membership information" on that web site for a printout of a membership application form or send your membership fee to: NCPS, Inc, Tom Harville, Treasurer, 104 Birklands Drive, Cary, N.C. 27511.

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MARSHES

"In attaching a value to the land, we have often considered the marshlands as wastelands. In places, this soggy, energy rich real estate has been 'reclaimed' in vast quantities through ditching, draining and filling. We might be constructing man's cemetery on nature's nursery."

-A sign along a marsh boardwalk at Bodie Island, Cape Hatteras National Seashore, N.C.

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In his book, The Private Life of Plants, David Attenborough comments: "For most of the time their lives remain a secret to us, hidden private events. The reason is merely a difference of time. Plants live on a different time scale from ours...We only need to learn to look."

Wild Orchids in South Carolina: The Story
by Lucy Dueck

For you orchid lovers who would like to observe them close at hand in the wild, the South Carolina Native Plant Society (SCNPS) is offering a beautiful, informative 18-page booklet all about the wild orchids that grow in South Carolina. And if only a few species come to mind, you will be as surprised as I was that the checklist on the back page lists fifty-three. Of these, forty-two are illustrated with gorgeous photographs.

Additional information includes a family tree organized by the classification based on genetics, a checklist by genus, "A Selected Orchid Vocabulary" reviewing the orchid terminology and a bibliography (references) section. A fascinating tidbit is that a relative of the showy orchis in Turkey is used to make an ice cream called salep from the orchid's dried and ground tubers. It has been reported that the "ice cream orchid" is now seriously threatened.

This booklet emphasizes conservation so it does not list specific geographic locations for finding the orchids. However it does describe the habitat of each genera or subfamily. It might be a challenge to take the checklist on a series of field trips to the different habitats and see how many of the 53 species a serious orchid lover could find. Even if your field trip starts and ends in a recliner, this is a lovely booklet to own.

"Wild Orchids in South Carolina: The Story" is available for \$5 from John Brubaker, SCNPS, P.O. Box 21223, Charlotte, SC 29413.

Charleston

-Jeanne Smith

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The South Carolina Francis Beidler Forest in Four Holes Swamp was visited in October several years ago by the Botany Club. Among the many interesting plants we saw were two rare S.C. orchids: *Ponthieva racemosa*, the green-flowered late-blooming Shadow-witch orchid which we found in bloom, and *Epidendrum magnoliae*, the Green-fly orchid, the only epiphytic orchid in S.C. which we saw hanging on trees along the swamp boardwalk.



Shadow-witch orchid
Ponthieva racemosa

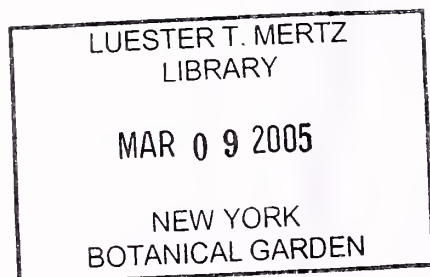


Green-fly orchid
Epidendrum magnoliae

SHORTIA
c/o Anne Ulinski
1212 Chanteloupe Drive
Hendersonville, N.C. 28739



FIRST CLASS



Library *Att: Dr. Buck
New York Botanical Garden
Bronx, N.Y. 10458-5126

104585126



SHORTIA

Vol. XXVII. No. 1

SPRING 2005

A quarterly publication of the Western Carolina Botanical Club

Editor: Anne Ulinski
Editorial Assistants: Pat Arnett and Jean Lenhart
Art Work: Pat Arnett
Member News: Ruth Anne Gibson

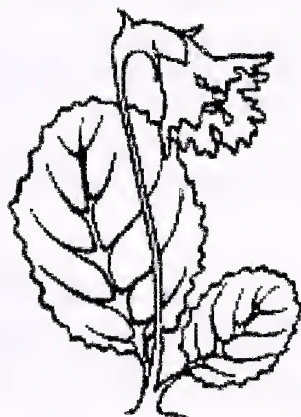
Please submit contributions for the next issue by May 15, 2005 to: Anne Ulinski
1212 Chanteloupe Drive, Hendersonville, N.C. 28739

The purpose of the Club is to study the plants of the Southern Appalachian Mountains and the Southeast through field trips and indoor meetings. Membership is open to all. Individual/family memberships are \$15. New members joining from the period July 1-December 31, pay \$8. All memberships are renewable on January first of each year. Send dues to: Larry Avery, 4 Windrush Lane, Flat Rock, N.C. 28731

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WESTERN CAROLINA BOTANICAL CLUB
SUMMER 2005



Shortia galacifolia

Oconee Bells

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Vice President: *Helen Smith*
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 Connie Updike

Treasurer: *Larry Avery*
Recorder: *Ken Borgfeldt*
Historian: *Suzanne Huie*

FROM THE PRESIDENT.....Bonnie Arbuckle

My favorite four letter word is HELP. This is the way Tom Hanks began his address to the recent graduating class of Vassar College. He continued by saying "Help and you will make a huge impact in the life of the street, the country and our planet"

In 2003, the club revised the Statement of Purpose and added "To encourage members and the public to protect plants, especially native plants, and to preserve the habitats in which they are found." It expresses our desire to help our community, country and planet.

In April we were invited to participate in the garden sculpture dedication at the Kellogg Center. Larason Lambert led a plant/habitat walk that day.

In May, Jenny Lellinger conducted a Wildflower Identification class at the Bullington Center. Following the indoor session, where participants learned to use the keys in Newcomb's guide, they walked in the native plant garden and practiced their new skills. One person told me that she was pleased to know the plant names so that she could tell her son to stop mowing parts of her yard.

This year we have continued our partnership with Bullington Center by donating books for the library, making a monetary contribution to the new classroom and continuing to add plants to the native woodland garden.

The Herrmans shared a garden walk as well as "extra" plants at our spring picnic in May at their home, Ramblewood. We will have a plant exchange at the July Annual Meeting so that you may share your extras with others.

Continue to help by sharing your knowledge of native plants.

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Cover: The flower on the cover is *Shortia galacifolia*, Oconee Bells. Our newsletter is named for this southern endemic which is now rare in the wild.

Member News

New Members

Billy Joiner, Flat Rock. Billy moved here from Maryland. He likes to garden and belongs to the Rhododendron, Rock Garden and Conifers Societies. He loves wild flowers and hopes to learn more about them.

John Reed, Asheville. John has degrees in zoology and entomology. He has taught classes in zoology, entomology, protozoology, genetic and insect toxicology at Clemson University and the Citadel. He is interested in hiking and wild flowers.

Bill and Ann Dice, Hendersonville. Bill and Ann moved here from Illinois. Bill is doing woodworking and Ann is active with a book club and Newcomers.

Diana Hankins joined us in January. This is the correct spelling of her name.

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Change of address, e-mail or telephone number please inform Larry Avery at 4 Windrush Lane, Flat Rock, N.C. 28731, Tel. 692-2679, email: alavery@cytechusa.com

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Annual Meeting

The Botany Club's Annual Meeting will be held on Friday, July 15 at Holmes Educational State Forest. We look forward to sharing the meeting with our members who are summer visitors. Previous meetings have always been held in January.

There will be a guided trail walk at 10:00 a.m. with the meeting beginning at 11:00. Reports by the President, Secretary and Treasurer will be followed by election of new officers and a short program. Some of our historic scrap books will be on display. If you have extra plants, bring them for a plant exchange.

Come with a covered dish to share and a good appetite -the food is always delicious.

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Western Carolina Botanical Club Financial Report - 2004

Income

Dues	\$1433	
Gifts	30	
Book Sale	409	
Total Income		\$ 1872

Expenses

Printing	\$ 564	
Postage	232	
Donations	750	
Program	85	
Office	29	
Total Expenses		\$ 1660
Income over expenses		\$ 212

Respectfully submitted, Larry Avery, Treasurer

Western Carolina Botanical Club Membership 2005*

Asheville

Beyer, Patsy
 Conway, Rachel M.
 Durpo, Wilma
 Evans, Maxilla
 Feil, Elisabeth
 Hansens, Aline
 Hankins, Diane
 Lackey, Charlotte
 Kolton, Marilyn
 Middleton, Dave & Milly
 Palmeri, R. & MacGregor, C.
 Reed, John
 Robbins, Paula
 Takaro, Tim & Marilyn
 Wong, Anna
 Balsam
 Chattaway, J.S. & Patricia
 Bon Air, VA.
 Verduin, Bill & Evelyn
 Brevard
 Blaha, Millie
 Crawford, Dean & JoAnn
 Farrar, W. Edmund & Carver
 Gunn, Bob & Betty
 Huie, Suzanne
 Hudson, Jack & Dorothy
 Iha, Nancy
 Jones, Betty
 Lellinger, Jeanette
 Moore, Eric & Peggy
 Smith, Jeanne
 Updike, Connie
 Candler
 Carlson, Betty
 Canton
 Fishback, H.D. and Jan
 Charlotte
 Ward, Charlotte
 Columbus
 Smoke, Henry & Therese
 Tener, Albert & Virginia

Etowah

Charlebois, Joy
 Flat Rock
 Arbuckle, Bonnie
 Avery, Larry & Anita
 Blackwell, Rusty/Cottier, Ray
 Gibson, Ruth Anne & John
 Joiner, Billy
 Fletcher
 Bachand, Bob & Kathy
 Gerton
 Florence, Thomas & Glenna
 Greenville, S.C.
 Burton, Mr. & Mrs. Henry B.
 Hendersonville
 Amato, Evelyn
 Anderson, Kenneth & Jane
 Bockoven, Paul & Elizabeth
 Borgfeldt, Ken & Chris
 Coleman, Persis
 Davis, Thomas and Jane
 Dice, Bill & Ann
 Drost, Jack
 Foresman, Louise
 Gadd, Charles & Frances
 Herrman, Don & Dana
 Kotch, Joel & Sharon
 Lambert, Larason & Juanita
 Lenhart, Jean
 Meister, Charles & Nancy
 Mizeras, Alan
 Montgomery, Bob and Elaine
 Pearson, Bud & Laverne
 Petteway, Jo
 Polchow, Peggy
 Russell, Beverly
 Sidoti, Marjorie
 Sinish, Bessie
 Styles, Cora
 Ulinski, Anne

Highlands

Davis, Charlton & Patricia
 Landwehr, Barbara
 Hilton Head. S.C.
 Strayer, Lucie A.
 Horse Shoe
 McCurdy, Cynthia and Mike
 Lake Toxaway
 Allen, Barbara D.
 Dziedzic, Betty
 McGuirt, Lucy
 Lexington
 Fisher, Don
 Marion
 Goldsmith, James W.
 Norcross. Ga.
 Arrington, Daisy
 Ormond Beach, Fl.
 McDaniel, Lois
 Pisgah Forest
 Smith, Helen M.
 Saluda
 Pearson, Millie
 Stone Mt. Ga.
 Lennox, Susan & David
 Sylva
 Harris, Mary Helen
 Horne, Ann and Lynn
 Miller, Earl & Bettye
 Stenger, Raymond & Gloria
 Tampa, Fla.
 Center, Dan and Barbara
 Tryon
 Galda, Odessa
 Waynesville
 Brinson, Beth
 Couric, Elrose/Hollinger, Sue
 Thomas, Jane and George
 Weaverville
 Saucier, Les

For the first time in three years we had a nice day for the **Hardy Souls Hike**. Millie Pearson and Larry Ballard led a merry bunch of twelve along the trail above the Green River Narrows. Despite some tricky stream crossings, everyone made it without loss of life or limb.

The trip to **Pearson Falls** seemed doomed from the start. By the time we arrived at Millie Pearson's home it was pouring down and we found that Pearson Falls was closed due to a downed tree. However, Millie Pearson saved the day as she halted the rain and then led the group on a walk on a trail at her home where trout lilies (*Erythronium umbilicatum*) were abundant. Then we walked the area along Rt 176 where we saw an unusual liverwort with fruiting bodies. We returned to Millie's for lunch and a fine spread of desserts prepared by Millie and her sister.

This was the first visit to **Kellogg Center**. We will visit the center two more times (at about 11 week intervals) to chart the progress of the plants through the year. The weather was mild for today's visit. This early in the season, flowering plants were limited to leaf sightings. We did find a small colony of walking ferns (*Asplenium rhizophyllum*).

The trip to **Glassy Mountain** started out on the chilly side but by the time we got there it had warmed up. The highlight of the walk for many of us was the abundance of flowering plants on the rock outcrops. The Elf Orpine (*Diamorpha smallii*) was especially plentiful and we only see it at Glassy Mountain.

We had a pleasant day for our visit to **Pacolet Falls**. As we descended the trail wildflowers were plentiful. Catesby's Trillium (*Trillium catesbaei*) was especially abundant covering one entire slope. Lunch at the falls was a treat as usual.

Jane Thomas and Janet Manning, the **Corneille Bryant Nature Center** horticulturists, led the walk around the garden developed on an acre plot in Lake Junaluska. A wide range of plants were found from Yellow Lady Slippers (*Cypripedium calceolus*) to Purple Pitcher Plants (*Sarracenia purpurea* var. *purpurea*). Luck was with us as the rain started just as we made the covered lunch spot.

Michael Skinner, Chief Naturalist at **Balsam Mountain Preserve**, met the group and led the walk up Sugar Loaf Trail. Lots of trilliums were found - Large-flowered Trillium (*Trillium grandiflorum*) was abundant especially along the highway fronting the preserve. An 1800's vintage cabin moved to the preserve was the site of lunch for the group.

Betty Jones led the walk around **Jones Farm**. Lots of species were found which showed little frost damage from the recent cold snap. Several showy plants - Columbine (*Aquilegia canadensis*), Shooting Star (*Dodecatheon meadia*), Celandine Poppy (*Stylophorum diphyllum*) - were added to our checklist.

The walk to Coleman Boundary was cancelled due to road closure and the **Botanical Gardens of Asheville** was substituted. The cold snap did little to deter the flowering plants as 89 species were identified in bloom. At least 12 different species of trillium were found.

Plant Rescue

Transylvania County

The Transylvania Native Plant Stewards (TNPS) is a new group organized through the Master Gardener Volunteers of Transylvania County. TNPS will be conducting native plant rescues in cooperation with local governments, landowners and developers in an effort to save native plants that would otherwise be lost to construction and development. Plant rescues will be supervised by the Transylvania Native Plant Stewards and carried out with the permission of the landowner and under a set of rules and procedures agreed to by both parties.

During the winter months 29 volunteers, ranging from expert to novice, learned about the best reference and field guides, plant communities, rare and endangered species and special and common plants. TNPS carried out its first successful plant rescue in March, five days before bulldozers arrived to begin clearing for a new home.

A brochure "Building in the Mountains" which addresses the issues of streams, slopes, wells, septic systems, and native plants was designed by the volunteers and printed by the Transylvania County N.C. Cooperative Extension Office. This brochure will be distributed to all local contractors, realtors, and the Junior Chamber of Commerce in order to raise the awareness of these crucial issues to new property owners and contractors.

TNPS can be reached through the Extension office at 828-884-3104.

Henderson County

The Hendersonville Plant Rescue group is being formed by Jack Drost, Geographic Information Service (GIS) Analyst, Henderson County. Responsible for the GIS online web site where the general public can find ownership information and maps, Jack is working with planners to find sites that have been approved for development. He already has the necessary documents with guidelines and rules which will be agreed to by both the landowner and the rescue group before a rescue begins.

He expects there will be a plant rescue opportunity within a month. Jack can be reached at 697-3390.

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At one of our winter meetings, Helen Smith, a Transylvania Native Plant Steward, asked if the Botany Club would be willing to support a native plant rescue. The answer was a definite yes. If there was a large plant rescue, WCBC would send a mass e-mail asking for volunteers. Volunteers in Transylvania County wanting to work on plant rescues, call the Transylvania N.C. Cooperative Extension office. In Henderson County, call Jack Drost.

International Plant Rescue

"The dangerously bedraggled illegals were immediately quarantined when they arrived at Miami International Airport from the Philippines last month... The unlawful arrivals were not endangered parrots, exotic jungle cats or any other imperiled animal. They were orchids – more than 1100 of them and they had literally been ripped from the wild."

The story of their rescue provides a rare look at the ceaseless effort that has led to the seizure of more than 40,000 contraband plants in the last five years. Teams of plant experts across the nation are regularly called upon to rescue plants by nursing them back to health, ultimately attempting to preserve their gene lines. "These unfortunate imports are like people trying to cross the border illegally," said Dr. Kim E. Tripp, director of the New York Botanical Garden in the Bronx where the seized orchids were sent. "We drop everything and try to save them."

"The illicit shipment was among the five largest of the last decade. It had been crammed into a dozen unlabeled cardboard boxes. The shipment's paperwork said that the orchids were artificially cultivated but an alert botanist realized that the plants' entry permit had been falsified and that "clearly these were wild orchids".

"On March 18 the plants arrived at the Botanical Garden from Miami and were quarantined in one of the greenhouse complexes to protect the institution's permanent collection. "It was a race against time" said the gardener in charge of the Garden's collection of 7,000 orchids. "Ten to 15 percent of the plants were dead on arrival or could not be saved. They were wilted, torn, shriveled, many with broken stems. The collectors knew what it was they wanted, and they didn't care what they had to do to get it...They were clear cutting orchids out of a section of forest. The danger is that they might remove an entire species."

Orchids, fabled for their extravagant beauty, belong to the most highly evolved and complex flowering-plant family, with more than 30,000 wild species. Some of the plants in the Miami shipment have been identified as worth \$500 or more and the entire collection could be valued in the tens of thousands of dollars.

-Excerpt from the New York Times, April 5, 2005

Two of the rescued plants hanging in a New York Botanical Garden greenhouse



Learn and Share

A Learn and Share program was held at the Sammy Williams Center on March 18 of this year.

Dana Herrman reviewed a book "Flowers to the Glory of God" by Sanda Sekly Hynson and the National Cathedral Altar Guild. Dana demonstrated the different ways of cutting and preparing bouquets so they would last for a week or more.

Alan Mizeras talked about moon flowers and shared with us his experience with those growing on his property.

Barbara Allen had a slide presentation about her attempt to establish native plants on a large rock outcrop in Lake Toxaway.

Jenny Lellinger showed slides and gave us handouts on fern allies.

Suzanne Huie told about a monarch butterfly she raised at her home and Helen Smith finished the presentation with a milkweed guessing game.

Thanks to all the members who volunteered.

Matching Game from an early Shortia

(Sorry, no answers were given)

Fox _____	bane
Bee _____	bell
Cow _____	cabbage
Goats _____	weed
Hare _____	sorrel
Lambs _____	balm
Pussy _____	wood
Skunk _____	wort
Toad _____	lily
Sheep _____	corn
Chick _____	tongue
Cardinal _____	head
Tooth _____	glove
Hound's _____	toes
Tiger _____	beard
Squirrel _____	quarters
Turtle _____	flax
Dog _____	flower



Monarch butterfly with
Milkweed



Lycopodium
obscurum

Walking Fern— *Asplenium rhizophyllum* L.
[syn. *Camptosorus rhizophyllus* (L.) Link]

Carolus Linnaeus, who originally named this fern, placed it under the genus *Asplenium*, commonly known as spleenwort. Both generic and common names followed Dioscorides' Doctrine of Signatures, a pharmacopeia which attributed curative properties to plants that were reminiscent of a particular body organ, in this case –the spleen.

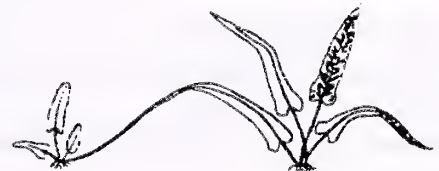
The Walking Fern's wavy-margined frond with auricles at its base, is undivided, slender and monomorphic. Its specific epithet, *rhizophyllum*, is derived from the Greek words for root and leaf. It refers to the ability of a Walking Fern's frond to root at the apex and form a new plant when it comes in contact with an appropriate substrate. Thus, it appears to "walk" around the parent and subsequent plants. The apex of its rachis contains a proliferous bud that enables it to do this. This is one of the many forms of asexual, or vegetative, reproduction that provide most ferns with an alternate means of establishing new plants.

Asplenium rhizophyllum is one of seven parents from which 18 hybrids are derived, forming the 2nd largest hybrid fern complex in the US.

Walking Fern grows on rocks that are high in calcium. Tom Goforth writes: "I have never seen it just in soil but it will grow in a pot. It is usually found in a mat of mosses on limestone, marble, and occasionally on amphibolite (high calcium). It ranges up to northern Michigan and southern Canada. So the pH of its environment is circumneutral. The soils are usually rich in humus (that are part of the moss mats). Sometimes it also grows in crevices in calcium rocks."

"A similar fern, *Camptosorus pinnatifidum*, Lobed Spleenwort, occurs rarely in our area. It has long attenuated fronds like *rhizophyllum*, but the fronds are pinnatifid-not entire like *rhizophyllum*. It grows only in acid rock crevices. There are a few small colonies of *C. pinnatifidum* in the Wadakoe Mountain area on granite gneiss bluffs. In a garden, the Walking Fern can be grown successfully when placed on a limy rock with moss in a shady moist area. It tolerates some root exposure."

This attractive, evergreen plant with glossy, leathery, dark green fronds is uncommon because of its very specific habitat requirements. Botany Club records show that we have seen Walking Fern at Pearson Falls, Panther Creek, Station Cove (at the falls) and most recently at the Kellogg Center.



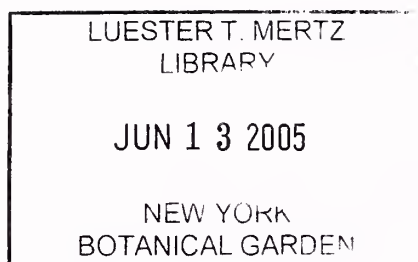
Jenny Lellinger, Tom Goforth and Ken Borgfeldt contributed to this article
The drawing is from Fern Finder, by Anne and Barbara Hallowell, Second Edition

SHORTIA
c/o Anne Ulinski
1212 Chanteloupe Drive
Hendersonville, N.C. 28739



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SHORTIA

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A quarterly publication of the Western Carolina Botanical Club

Editor: Anne Ulinski
Editorial Assistants: Pat Arnett and Jean Lenhart
Art Work: Pat Arnett
Member News: Ruth Anne Gibson

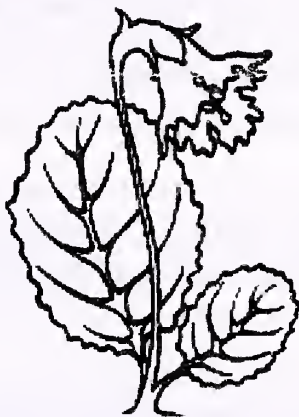
Please submit contributions for the next issue by August 15, 2005 to: Anne Ulinski
1212 Chanteloupe Drive, Hendersonville, N.C. 28739

The purpose of the Club is to study the plants of the Southern Appalachian Mountains and the Southeast through field trips and indoor meetings. Membership is open to all. Individual/family memberships are \$15. New members joining from the period July 1-December 31, pay \$8. All memberships are renewable on January first of each year. Send dues to: Larry Avery, 4 Windrush Lane, Flat Rock, N.C. 28731

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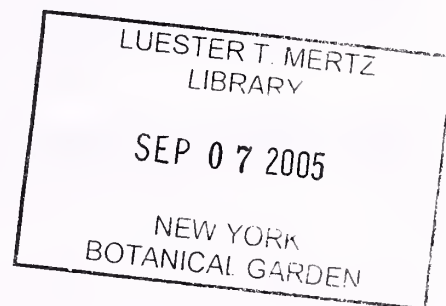
SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB
FALL 2005



Shortia galacifolia

Oconee Bells



WESTERN CAROLINA BOTANICAL CLUB

<i>President</i>	<i>Larason Lambert</i>	<i>Treasurer</i>	<i>Larry Avery</i>
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FROM THE PRESIDENT.....Larason Lambert

A Communication with Nature -- sitting on a log in the Georgia Piedmont, 1971

The forest floor speaks to me,
Slowly at first, a word at a time,
But then more quickly, until with a rush,
All is slurred in a summer shower.

We certainly have had more than our share of thunderstorms this season. The extremely wet weather from thunderstorms and remnants of hurricanes during these last three summers has interfered with a number of Club outings. It has also affected the vegetation we observe on these outings. On drier sites the wetness has produced a more-abundant flush of vegetation, but on normally wet sites, the excess moisture has likely stressed many plants and perhaps killed some off. That has certainly been the case in my "bog" by the brook.

An interesting question is whether this extreme wetness is just a short-term deviation from normal, or is it an indication of a long-term trend toward a wetter climate associated with global warming. Of course, these recent wet years were preceded by a string of drier years, so who's to say?

One thing is certain, Mother Nature will always strive to make sure that life goes on. In the face of thousands of years of drastic temperature changes during past glaciations, and subsequent coastal inundations from rising sea levels due to glacial melting, plants have been able to "migrate", to shift the range in which they occur following changes in climate. The critical question now is whether conditions are changing too rapidly for plants or ecosystems to "migrate".

These pressures on native flora may pale in relation to the glaring impacts of development and construction in our area, but in the long-term period of hundreds to thousands of years, they will likely have an overriding impact, for better or worse.

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Cover: The flower on the cover is *Shortia galacifolia*, Oconee Bells. Our newsletter is named for this southern endemic which is now rare in the wild.

NEW MEMBERS

Carolyn Alperin, Horse Shoe. Carolyn lives behind the post office in Horseshoe but has a Hendersonville address. She is a pharmacist for Eckerds in Laurel Park and hopes to join us every other Friday when she is off work. She likes to garden and is interested in identifying native wildflowers.

Alan Graham, Brevard. Alan moved to Brevard in 2005. He joined the Master Gardener program in Brevard and helps maintain trails in Pisgah National Forest. He wants to know more about the plants he sees.

Pierre Hart, Etowah. Pierre is a master gardener and interested in learning about native wildflowers. He was a former professor of Russian.

Linda Hauschild, Pisgah Forest. Linda came from Rochester, N.Y. one and a half years ago where she was an occupational therapist. She has been interested in flowers since childhood and wants to know more about the wildflowers here.

Eunice Nichols, Arden. Eunice and her husband moved here 12 years ago from Long Island, N.Y. Every spring they go to the Blue Ridge Parkway to see bloodroot. She is interested in native wildflowers and where they grow.

Cindi Probst, Asheville. Cindi came to Asheville from Clearwater, Fla. but has lived many places. She loves flowers and nature and likes to photograph them. She wants to learn more about identifying plants.

Carol Repici, Hendersonville. Carol and her husband divide their time between here and Cape May, New Jersey. She bid on a wildflower walk that Bonnie Arbuckle offered at a church auction. Carol appreciates the expertise of our group and their willingness to share their knowledge with a beginner.

Harriet Walls, Brevard. A former member, Harriet has been interested in wildflowers for a long time and was a founding member of the Georgia Native Plant Society. She lives in Sherwood Forest and has joined the Transylvania Native Plant Rescue Group.

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Change of address, e-mail or telephone number please inform Larry Avery at 4 Windrush Lane, Flat Rock, N.C. 28731, Tel. 692-2679, email: alavery@cytechusa.com

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Surprise! Surprise! The **Davidson River** walk was conducted under sunny skies for a change. The effect of last years flooding was evident; the swinging bridge was out of commission and we had to modify the normal walk route. Otherwise, a pleasant walk on level ground. We saw Dyer's Woad (*Isatis tinctoria*) that has not been logged into our walk reports before.

Pilot Mountain presented a little different challenge this year as the road past the Fish Hatchery was closed due to a mudslide from last year's hurricanes. We had to come in the "back door" which was very dusty especially if you were in the last car! We were a little early for most everything. Interrupted Ferns (*Osmunda claytoniana*), which are plentiful, had hardly broken ground.

The **Spring Picnic at Ramblewood** was its usual success. Don made us welcome (?) and Dana led the tour before we chowed down. Afterward lots of folks scrambled over the front yard collecting samples of Birdfoot Violet (*Viola pedata*) to transplant at home.

Silver Run Preserve is the largest Nature Conservancy-owned property along the Blue Ridge Escarpment. The walk was a follow up to an indoor presentation last winter. Dan Pittillo accompanied us pointing out several interesting species including gametophytes of the Appalachian Shoestring Fern (*Vittaria appalachiana*).

We were two weeks later than usual for the walk to **Tanbark Tunnel - Rattlesnake Lodge**. The Whorled Pogonia (*Isotria verticillata*), which is a highlight of that walk hadn't started blooming yet. However, we saw lots of other goodies such as Clinton's Lily (*Clintonia umbellulata*), Wild Sarsaparilla (*Aralia nudicaulis*), and Small-flowered Phacelia (*Phacelia dubia*).

Ashmore Preserve is one of our best bog sites. We were rained out last year and it threatened this year but we went anyway. It turned into a nice trip. The rain held off until we were almost back to the cars. The bog area was loaded with Water Sundew (*Drosera intermedia*), Rose Pogonia (*Pogonia ophioglossoides*), Grass Pink (*Calopogon tuberosus*) and Horned Bladderwort (*Utricularia cornuta*).

The walk through **Fernhaven** led by the Lamberts was a treat as usual. We viewed new additions including walkways, stairs, and bridges that have kept Larason busy.

The walk at **Kanuga Conference Center** was focused on grasses. This was a follow up to an indoor session from this past winter given by a USFS botanist, Gary Kauffman, on grasses. Unfortunately the botanist was ill and couldn't lead the walk. Several club members jumped into the breach and covered several grasses that we saw including Fringed Sedge (*Carex crinita*). We also saw one of the largest patches of Sweet Pitcher Plants (*Sarracenia rubra* ssp. *jonesii*) that we have seen.

We had a great day walking the meadows of the **Kellogg Center** on our second visit of the 2005 season. Most striking among the tall grass was the Ragged Fringed Orchid (*Platanthera lacera*) that we hadn't seen here before.

Tom Goforth led a new walk to **Shy Valley Farm** in Tennessee limestone country. As is customary for Tom's walk we forded streams and bushwhacked our way through the underbrush. We saw interesting rocks millions of years old containing fossils of sea creatures. Fern species of note were the Maidenhair Spleenwort (*Asplenium trichomanes*) and Black-stemmed Spleenwort (*Asplenium resiliens*), in addition to a large colony of Walking Fern (*Asplenium rhizophyllum*).

The Annual Meeting was held in the summer for the first time in an effort to attract more of our seasonal members. A short walk over one of the **Holmes State Forest** trails was conducted preceding the meeting. The meeting highlight was a presentation to John Murphy of the Bullington Center for his efforts to educate the public and children in particular into the world of nature. A covered dish lunch was enjoyed by all.

The walk at **Haywood Gap** presented a glimpse of the "other side of the mountain" from Bear Pen Gap (a walk for later in the year). After a moderate climb we found a beautiful meadow filled with a variety of wildflowers including Clammy Azalea (*Rhododendron viscosum*), Fly Poison (*Amianthium muscaetoxicum*) and Leatherflower (*Clematis albicoma*).

FAMILY

DISTRIBUTION

Psilotophyta Psilotaceae – Whisk-ferns

(worldwide: 2 gen; 4 – 8 sp.)

Sphenophyta Equisetaceae – Horsetails & Scouring-rushes

(worldwide: 1 gen; 15 sp.)

Lycophyta Lycopodiaceae – Club-mosses
Selaginellaceae – Spike-mosses
Isoëtaceae – Quillworts

(worldwide: 3 gen; 350 sp.)
(worldwide: 1 gen; 700+ sp.)
(worldwide: 1 gen; 150 sp.)

Scientific Name	Common Name	Family Name	Also In
FERN ALLIES			
<i>Equisetum arvense</i>	Common Horsetail, Field Horsetail	Equisetaceae	GA, SC,
<i>Equisetum hyemale</i> var. <i>affine</i>	Tall Scouring-rush	Equisetaceae	GA, SC,
<i>Huperzia appalachiana</i>	Appalachian Club-moss or Fir-moss	Lycopodiaceae	GA, VA
<i>Huperzia lucidula</i> syn. <i>Lycopodium lucidulum</i>	Shining Club-moss or Fir-moss	Lycopodiaceae	GA, SC, VA
<i>Huperzia porophila</i>	Rock Club-moss or Fir-moss	Lycopodiaceae	GA, SC,
<i>Isoetes engelmannii</i>	Engelmann's Quillwort	Isoetaceae	SC, VA
<i>Isoetes valida</i>	Mountain or Carolina Quillwort	Isoetaceae	SC, VA
<i>Lycopodiella alopecuroides</i>	Foxtail Bog Club-moss	Lycopodiaceae	GA, SC,
<i>Lycopodiella appressa</i>	Appressed Bog Club-moss, Southern Bog Club-moss	Lycopodiaceae	GA, SC, VA
<i>Lycopodiella inundata</i>	Northern Bog Club-moss	Lycopodiaceae	VA
<i>Lycopodium clavatum</i> var. <i>clavatum</i>	Common or Running Club-moss	Lycopodiaceae	GA, SC,
<i>Lycopodium dendroideum</i>	Prickly Tree Club-moss, Round-branch Ground-pine	Lycopodiaceae	VA
<i>Lycopodium digitatum</i> syn. <i>L. flabelliforme</i> , <i>Diphasiastrum dinitatum</i>	Southern Running-pine, Cedar or Fan Club-moss	Lycopodiaceae	GA, SC, VA
<i>Lycopodium hickeyi</i>	Hickey's Club-moss	Lycopodiaceae	VA
<i>Lycopodium obscurum</i>	Flat-branched Tree Club-moss, Princess-pine	Lycopodiaceae	GA, SC, VA
<i>Lycopodium tristachyum</i> syn. <i>Diphasiastrum tristachyum</i>	Pursh's Slender Ground-pine, Blue Ground-cedar, Wiry Ground-cedar	Lycopodiaceae	GA, SC, VA
<i>Selaginella apoda</i>	Meadow Spike-moss	Selaginellaceae	SC, VA
<i>Selaginella rupestris</i>	Rock Spike-moss	Selaginellaceae	SC, VA
<i>Selaginella tortipila</i>	Twisted-hair Spike-moss	Selaginellaceae	SC
Total genera 5	Total species 19	Total families 4	

Sources: Flora of North America Editorial Committee. *Flora of North America North of Mexico*. Vol. 2
• Pteridophytes and Gymnosperms. New York. Oxford University Press. 1993.
• United States Department of Agriculture. *Integrated Taxonomical Information System*. 2004.
• Weakley, Alan S. *Flora of the Carolinas, Virginia, and Georgia*. University of North Carolina. 2004.

4

The Botanical Club Recognizes Bullington Coordinator

At our annual meeting in July, the club recognized John Murphy for his many programs educating children and adults about the wonders of our natural world and for teaching us all to be good stewards of our mountain lands.

In the recognition speech, Alan Mizeras quoted a column by National Wildlife President, Larry Schweiger, in the June-July 2005 issue of the National Wildlife Federation Magazine:

“Our children are disconnecting with nature. The average suburban young person has little relationship to increasingly distant wild places. By the time they are seven years old, most youngsters have been exposed to more than 20,000 advertisements. They can identify 200 corporate logos, but they cannot identify the trees growing in their front yards. They can navigate the web with ease, but few of them have even climbed a tree, and even fewer have the love of nature needed to be good stewards. How can they be good stewards if they don't care about trees, wildlife or wild places?”

Mr. Schweiger goes on to say: “..I wish every conservation-minded adult would take a moment to introduce just one child to just one tree. It's a small step but who knows what little actions like this can stimulate childhood curiosity? How can we expect our children to care if you and I don't help them make the critical connections to nature while they are young enough to have their values shaped? ..If you want to do something for nature this season.. plant a seed in the heart of a future steward.”

Alan continued:

“In the Spring of 2004, John Murphy, coordinator at the Bullington Center, created a program for children, Kindergarten-4th grade, called “What Makes a Tree Grow?” and during those few spring months he planted a seed in the minds of each of the 1162 children who took part in that program.”

“But that is only a small part of John's contributions through his work at Bullington. For the school year 2004-2005 there was his Pumpkin Patch project (698 children), Plant Explorations (745), Wildlife Interactions (258), and Plant Math (147). Also new this year, each of eight county schools planned and planted a winter garden which the students designed. The seeds were purchased within a budget and raised in the greenhouse until ready for planting. An award was given for the best garden. There were 276 students taking part in this project.”

“In 2003, John and designated representatives of the Henderson County School System sat down to develop a program to challenge the special needs students at the four high schools. The program was to be called Bullington Onsite Occupational Student Training or simply BOOST. This year there were 27 graduates

in the BOOST Program. A short ceremony was held on May 24, for the purpose of giving some special awards to students whose efforts were exemplary. This was a new feature. With the help of volunteers, John has continued to develop BOOST in order to challenge these students to consider our county's growing horticulture industry. Several students have found that planting plants is their 'thing' and most of the others enjoy being at Bullington and doing the work necessary to maintain the facility."

The Botanical Club has had a close relationship with the Bullington Center since we had our indoor meetings there in 2001. We began an inventory of the plants on the property. This is a continuing program. Members have donated native plants from their home wildflower gardens and we have presented a wildflower identification workshop at Bullington Center for the last three years.

After the recognition speech, John was presented with a certificate of appreciation, a book, and a check for \$200.

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DID YOU KNOW?

Linnaeus' birth name was Carl von Linne but while he was devising his well-known system of classifying plants, he latinized his own name to Carolus Linnaeus.

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No plant lives in isolation. There are always other creatures or plants nearby that are companions and there is always a reason for them to be together. Native plants evolved symbiotic relationships with insects, bacteria, and other minute creatures living in the soil. These, in turn, keep trees, other plants and animals--and eventually people--healthy. This fragile web of life took millions of years to develop. When people disparage "tree huggers" because they want to save the tree for a small bird or large butterflies, it's not some wacky spaced-out concept. Every organism depends on other organisms for survival. For example, without lupines there would be no Kramer blue butterflies, and without them to pollinate the lupines, the plants would become inbred and eventually die out. You can't save a plant or an animal in isolation, you have to save the whole habitat.

From, BOTANICAL NORTH AMERICA, the Illustrated Guide to our Native Plants, Their Botany, History, and the Way They Have Shaped our World, by Marjorie Harris, (2003).

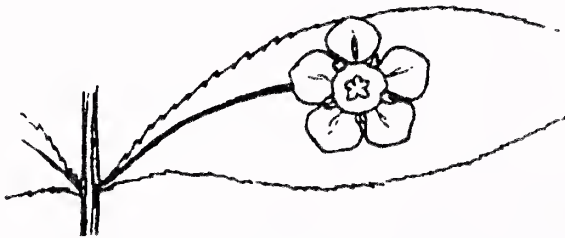
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"When one tugs at a single thing in nature, he finds it attached to the rest of the world."

-John Muir

LOOK AGAIN!

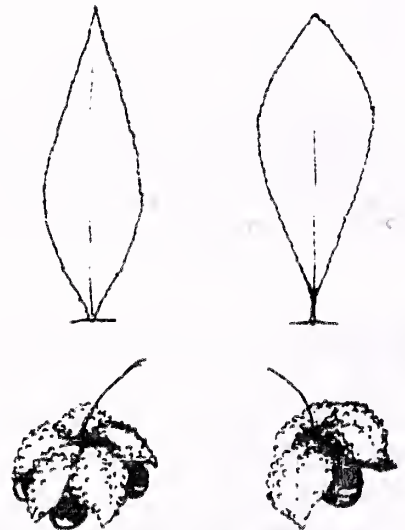
Anyone seeing Euonymus americanus for the first time when it is in flower may be excused for raising an eyebrow at being told that its popular name is "Hearts a'Bustin' with Love." After all, the flowers (which bloom just when the spring woods are their prettiest) have little going for them. They are sparse in number, modest in size, and so flat as to appear almost two-dimensional. And their color is so undistinguished that no one label suits; one must call it something like "pale creamy purplish yellow-green."



But a return visit in September furnishes all the explanation that is needed for the quaint colloquial name. Where the drab little flowers had been there now are brilliant pink, warty capsules opening up to expose shiny ver-

million arils, which in turn enclose the seeds. These colorful fruits also account for another name, "Strawberry Bush."

Although many of us are not aware of it, the "Hearts a'Bustin'" appellation is also given to a similar species, Euonymus obovatus. Both are square-stemmed bluish green shrubs with flowers that are virtually identical, but Euonymus americanus is erect and may attain a height of six feet, while in E. obovatus the main stem is prostrate and the ascending branches do not exceed two feet. For this reason, the latter is sometimes called "Running Strawberry Bush." The specific name also holds another clue; the leaves are obovate, or widest above the middle. The most striking difference, however, is seen in the fruits, which in the case of E. americanus are usually five-lobed whereas those of E. obovatus split into only three parts.



Both of these shrubs belong to the Staff-tree Family, which counts among its other members Celastrus orbiculatus, the rampant Oriental bittersweet vine which has overwhelmed native shrubs and trees in some areas, and C. scandens, the less aggressive American bittersweet. In each of these, the crimson arils revealed by the splitting of the yellow-orange capsules betray its close relationship with our species of Euonymus.

Dick Smith

In 1999 Dick Smith cleared for publication some of the *Look Again!* articles which he wrote for earlier issues of *Shortia*. This is the fifth to be reprinted. The Club has identified Euonymus obovatus at Kanati Fork, Coleman Boundary and Graybeard Mt. to Glassy Minefalls.

Restoring Land and Water in South Africa

"Working for Water" was started in 1995 by the South African government. It hires unemployed people to clear thirsty alien trees from important watersheds around Cape Town. Alien trees not only displace native trees but suck up water needed by humans. A single eucalyptus tree consumes up to 100 gallons of water in a day, so removing the trees is like putting water back in the system. "Rivers that hadn't run in 30, 40 years began to run again", said Guy Preston, the founder for "Working for Water". The program now operates in every South African province, has an annual budget of \$60 million, and has inspired a group of sister programs that may change the face of conservation across the continent. Their aim is not just to restore ecosystems but to put them to use for human benefit.

"Working for Wetlands" was spun off from "Working for Water" five years ago and is now employing teams throughout the country to restore marshes. Healthy marshlands serve to purify the water that runs through them. "The nice thing about wetlands is that you start helping the system and it will start helping itself", said Japie Buckle, technical adviser at a wetlands restoration project in Agulhas National Park. "Within two years you won't believe it is the same area".

Things are already coming full circle on the Agulhas Plains where several hundred acres of wetlands were restored last year. "The farmers are shaking their heads because the state paid them to drain these same fields 40 years ago", said Mr. Buckle. "Now the state is paying to put the water back."

"Working for Woodlands" is a pilot project to reforest subtropical thickets to capture carbon from the atmosphere and support biodiversity on the land.

"Working on Fire" has been dispatching teams since 2003 to prevent and control wildfires.

One goal of these projects is to provide people with skills to help them get jobs in the private sector. All of the programs require that workers be recruited from the "poorest of the poor", and in an effort to raise participation by single parents, six of every 10 must be women.

Financing such programs is a constant problem and it has been suggested that timber companies might pay for fire protection, hydroelectric companies for erosion control to keep silt from clogging their turbines, and municipalities for the restored groundwater that ends up in drinking glasses and irrigation ditches.

-Quotation and excerpts from The New York Times, July 26, 2005

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A quarterly publication of the Western Carolina Botanical Club

Editor: Anne Ulinski
Editorial Assistants: Pat Arnett and Jean Lenhart
Member News: Ruth Anne Gibson

Please submit contributions for the next issue by November 15, 2005 to: Anne Ulinski
1212 Chanteloupe Drive, Hendersonville, N.C. 28739

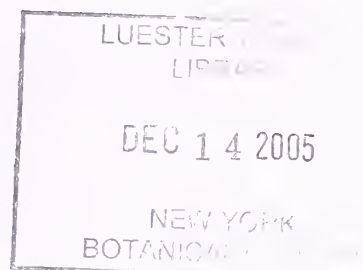
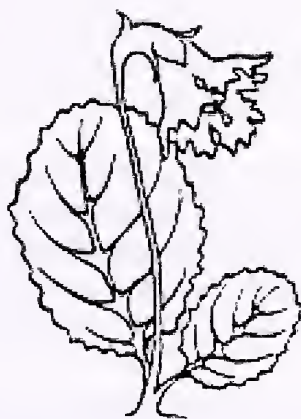
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SHORTIA

NEWSLETTER OF THE
WESTERN CAROLINA BOTANICAL CLUB

Winter 2005



Shortia galacifolia

Oconee Bells

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WESTERN CAROLINA BOTANICAL CLUB

<i>President</i>	<i>Larason Lambert</i>
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Treasurer *Larry Avery*
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FROM THE PRESIDENT.....Larason Lambert

It's hard to believe that Juanita and I have been members of the Western Carolina Botanical Club for seven years now. Time flies when you're having fun – and it has been fun. It has also been a botanical learning experience, but what stands out most in my memory of club field trips is the camaraderie of the members – a more congenial group I've never known.

The first organization we joined upon our arrival in Hendersonville was ECO, the Environmental and Conservation Organization. This past October they held their annual meeting, and I've concluded that I don't identify with them nearly as much as I do with the Botanical Club (though I'll stick with them because they're a good cause). A few years ago I was instrumental in the formation of the Henderson County Bird Club, but I've found that I'm not particularly comfortable with them as a group, and have not participated at all in the past two years. Last year I felt the need to join a garden club of some kind, but the two that I met with just didn't measure up to the Botanical Club, socially.

Granted, occasionally I've had my differences with other members, mostly in terms of trip logistics, and sometimes in response to personalities, and I've seen similar feelings expressed by other members at one time or another. But members seem to accept other members as they are, together with shortcomings, and I find this admirable (and I'm grateful for it).

Perhaps the social ambiance of the club is just a transient state derived from the current active membership, and will change as new members join the club and old members drop out. Has it always been this congenial? Regardless, I feel we need to nourish and perpetuate this congeniality to the utmost of our abilities. Perhaps we do this already. A new member that doesn't fit in seems to become attuned to the ambiance of the club and is "socialized " by the club. However it works, let's keep it going, because I think we are more than just a club, I feel we are a micro-society.

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Cover: The flower on the cover is *Shortia galacifolia*, Oconee Bells. Our newsletter is named for this southern endemic which is now rare in the wild.

New Members

Glenda Bentley, Hendersonville. Glenda is a native of Hendersonville and has returned after 30 years away. She is employed but hopes to join us when she can.

Helen Bott, Arden. Helen moved here from Long Island, N.Y. nine years ago. Her property faces the French Broad River and has woods with trails. She would like to identify the flowers she finds there.

Ed Collins, Hendersonville. Ed is president of the Rhododendron Society. He has been in our area for 15 years and has recently moved from Finley Cove where he left a collection of azaleas and rhododendrons. However, his new place has a nice garden and also a three acre plot that he is clearing to make a new garden.

Gussie Gray, Spruce Pine.

Sue Hewlette, Hendersonville. Sue is a certified landscape designer who moved here in 1998. She volunteers at the Sandburg goat barn and tutors for the Literacy Council.

Lucy and Bob Prim, Hendersonville. Lucy has loved flowers and painted them since young adulthood. She grew up in California and lived in Charlotte before moving to Flat Rock in July. She is interested in identifying the many flowers here.

Annual Dues

January 1, 2006 is the date for all membership renewals. We do not have the resources to send out individual reminders so mail your dues to Larry Avery, 4 Windrush Woods Lane, Flat Rock, N.C. 28731.

"Learn And Share" - Friday, February 10

We need four or five volunteers to share with the membership something they have recently learned--perhaps a book or magazine article, a new plant discovered, a travel experience, or nature photographs. Presentations will be limited to 15 minutes. This has been a very enjoyable program in the past and we look forward to another successful "Learn and Share" this winter. If you can volunteer for the February 3rd indoor program, call Anne Ulinski at 697-9527.

Indoor Meeting Cancellation

A reminder that when the Henderson County Schools are closed, the Sammy Williams Senior Center will be closed, and our indoor program for that day will be cancelled.

Change of Address

Any change in street address, e-mail or telephone number please inform Larry Avery at 4 Windrush Lane, Flat Rock, N.C. 28731, Tel. 692-2679, email: <alavery@cytechusa.com>.

The reporting period was dry!, dry!, dry! Only one walk was rained out and that was **Tennent Mountain** when a cold rain started just after the walk started.

The walk along **Sky Valley Road** presented several species that are found in very few areas including Fern-leaved False Foxglove (*Aureolaria pedicularia*), Orange Grass (*Hypericum gentianoides*) and Hardhack (*Spiraea tomentosa*) found for the first time. The large number of Yellow Fringed Orchid (*Platanthera ciliaris*) and Nuttall's Lobelia (*Lobelia nuttallii*) were highlights of the trip.

We had a good day for the visit to **Bear Pen Gap**, not too hot and the plants were at peak bloom. Noteworthy were masses of Pink Turtlehead (*Chelone lyonii*) and an open field full of Blueberries ripe for the pickin'. Seeds provided some interesting sights including those of Rose Twisted Stalk (*Streptopus lanceolatus* v. *roseus*) and the Umbrella Leaf (*Diphylleia cymosa*).

The **Kellogg Center**, which was our concentration location for this year, was visited twice during the reporting period. The August visit found many plants in bloom including Butterfly Weed (*Asclepias tuberosa*), Large Buttonweed (*Diodia virginiana*) and New York Ironweed (*Vernonia noveboracensis*). The October visit was pretty much devoid of blooms but the seeding plants were numerous. The Smooth Sumac was bright red and the Bittersweet Nightshade (*Solanum dulcamara*) fruit looked like small tomatoes. A compilation of the results of all of the walks will be made available to the Center for their use.

We visited Mary Helen Harris and Bettye Sylva's properties on **Cut Off Mountain**. The highlight of the trip was the Monkshood (*Aconitum uncinatum*) in bloom, which was a treat to see. Speaking of sights, a piece of women's apparel was observed hanging from a sign and there was some discussion of the Latin name!

The trip along the **Blue Ridge Parkway South** from **Wagon Road Gap** was not "hurricaned out" this year. As usual the flowers were spectacular. The climax of the outing came at Wolf Mountain Overlook where we found the Grass-of-Parnassus (*Parnassia asarifolia*) and False Asphodel (*Tofieldia glutinosa*), the last a plant we find only at this location.

The overnight trip to **Weymouth Woods Preserve** in Southern Pines, NC was a success and enjoyed by the group who attended.

The weather tried to cancel the **Fall Picnic at Bramblewood** but the Herrmans could not be deterred and the feast went on as planned. Everyone who braved the threat of rain had a great time.

The first trip to **Cedar Rock Mountain** in Dupont State Forest was near the end of the blooming season but we found a few unusual plants including a new entry into our database, the Zigzag Bladderwort (*Utricularia subulata*). The St. Peter's-wort (*Hypericum crux-andreae*) was another unusual find.

The trip to **White Side Mountain** was enjoyable as the fall colors were just starting. The Witch Hazel (*Hamamelis virginiana*) was in full bloom. The Mountain Cynthia (*Krigia montana*) swayed in the gentle breeze as we lunched on the high elevation granitic dome.

A group from the Environmental Education Mountain Trail Outdoors School joined us on the **Kanuga Conference Center** trip. While the numbers of blooming plants were limited, a large number of ferns were identified including the Dissected Grape Fern (*Botrychium dissectum*) and the Resurrection Fern (*Pleopeltis polypodioides*).

The end of the outdoor season was reached with trips to **Jones Gap State Park** and **FENCE**. As you might expect, flowering plants were pretty much finished, but the walks generated lots of opportunities for botanizing and good old fashion socializing.

An Exhibit To See

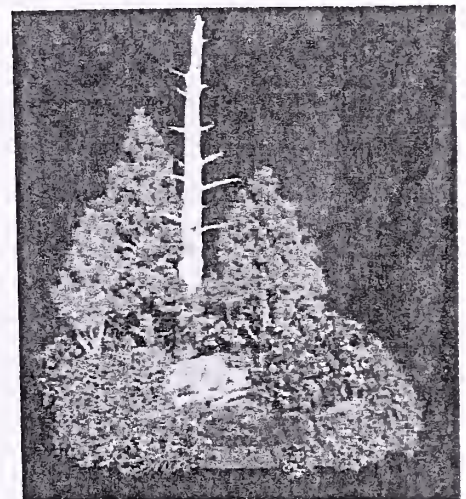
"When you enter here, become small...Open your mind to the possibility that the greatest mysteries of life can be found in a simple, tiny leaf.."

These words are at the entrance to the new Bonzai exhibit at the North Carolina Arboretum. As you follow the outdoor ramps, you will come upon displays of miniature trees, shrubs and woodland scenes with mosses and even ferns all set on shelves in front of slate gray stone walls. Although we are told that it is impossible to tell the age of the plants because records are not usually kept, some of the specimens, especially the trees, have the appearance of great age.

In the exhibit you will see the traditional Asian bonzai subjects such as Japanese maple and Chinese elm; tropical plants such as willow leaf fig and powderpuff; and American species such as bald cypress and limber pine. Arthur Joura, curator of this collection, has been growing and training scores of native Southern Appalachian trees and shrubs as well. He has cultivated bonsai of black and river birch, hop hornbeam, and white, pitch, shortleaf, and table mountain pines. Others are fothergilla, dogwood, Allegheny spurge, Carolina rhododendron, mountain laurel, sourwood, yellow root and flame azalea. Joura has also composed scenic vistas such as the highlands of Graveyard Fields and the peaks of Mount Mitchell. In progress is a Roan Mountain scene.

"There is an image of bonsai as a mystical practice belonging to an ancient culture, requiring apprenticeship to a master and knowledge of foreign terms. Bonsai is actually an engaging, challenging intimate form of horticulture that functions as a form of creative expression." So reads another of the messages the visitor reads as he wanders down the ramps.

The Arboretum exhibit began with a donation of a large bonsai collection and other donations followed. The collection is in a gated area with all the exhibits in the open air. Those plants which cannot survive a frost, will be taken to an indoor climate controlled storage area where they will remain until spring, and other plants will be placed on the outdoor shelves so that the exhibit can be open throughout the year.



"Mt. Mitchell"

The gated bonzai area is open weekdays 9-5 and Sunday 12-5. The entry fee to the Arboretum is \$6 (free to members) except Tuesday when there is no fee. For more information on the Arboretum and its exhibits go to <www.ncarboretum.org>

A New State Park

In May of this year, the North Carolina General Assembly authorized the creation of a state park in western North Carolina. The bill, passed by the Legislature, reads:

"Whereas, the Hickory Nut Gorge/Chimney Rock area in and near western Rutherford County contains spectacular cliffs, rugged mountains, fissure caves, waterfalls, and unusually rich soils that support at least 36 rare plant species and 14 rare animals; and whereas, the Hickory Nut Gorge/Chimney Rock area is one of the major centers of biodiversity of statewide significance; now, therefore, the General Assembly of North Carolina...authorizes the Department of Environment and Natural Resources to add a State Park unit located in the Hickory Nut Gorge/Chimney Rock area to the State Parks System."

Conservation groups were already protecting property in Hickory Nut Gorge. The Nature Conservancy (TNC) owns property in the Gorge at Rumbling Bald (850 acres) and Cedar Knob (312 acres). The Carolina Mountain Land Conservancy (CMLC) owns 600 acres on the slopes of Little Pisgah Mountain, which rises almost 4400 feet near Gerton. These tracts together total almost 1800 acres.

The Carolina Mountain Land Conservancy's director of land protection, Reggie Hall, had been working since April to purchase a 1568 acre estate called World's Edge. In early May, Reggie got word that a developer was also interested in buying the land. TNC and CMLC raced to raise \$16.1 million to acquire the property. TNC pledged \$10 million and CMLC \$6 million. Loans from the Open Space Institute, the Self-Help Credit Union, the Conservation Trust for North Carolina and other generous supporters provided CMLC funding on an extremely tight deadline. On June 10th the estate accepted the \$16.1 million offer from the two conservancies. World's Edge will be held by the two conservancies until the state purchases the land. It will then become a part of the new state park.

World's Edge contains a mile-long set of steep slopes on the eastern edge of the Blue Ridge Escarpment with nearly four miles of streams and waterfalls. The area is home to the endangered white irisette (*Sisyrichian dichotomum*). Other unusual species in the Gorge area are the green salamander, a rare pygmy shrew, Indiana bats, a cave-adapted arachnid and the peregrine falcon.

"Acquiring World's Edge is a triumph for our region's people and our natural heritage," said Kieran Roe, Executive Director of CMLC. "With development pressures on the rise, opportunities to protect significant lands like this are becoming rare." To Jim Proctor, Mayor of Lake Lure, the protection of World's Edge was a dream come true. He grew up in Rutherford County and had hiked the property for years. "For my whole life I've known the most beautiful waterfall in the state is right here, but I couldn't tell anyone. I didn't want somebody to come in and develop this property."

Henderson, Polk and Rutherford counties do not have a nearby state park. Transylvania County has the new Gorges State Park in its southwest corner and on the east the Dupont State Forest which it shares with Henderson County. It also has a large chunk of the Pisgah National Forest. Yet there is not another state park between here and Mt. Mitchell, which is 33 miles north of Asheville in Yancey County. To the northeast is Lake James five miles beyond Marion and the South Mountains State Park which is south of Morganton.

The Carolina Mountain Land Conservancy is a local public interest group formed by a small group of dedicated volunteers in 1994. Since then it has been active in facilitating the protection of more than 12,000 acres in Transylvania, Henderson and nearby counties. CMLC is a membership organization with offices on Washington Street next to the Henderson County Library. For the second year it is sponsoring an AmeriCorp Program with 16 members working on conservation projects in our two counties. On March 17, 2006, a botany club indoor program will feature the AmeriCorp members talking about their projects. Among them will be Tonya Moore who is working with Dan Pittillo on a natural heritage inventory of Transylvania County.

For information on CMLC's mission, recent successes, and membership, go to Carolina Mountain Land Conservancy on your web site or contact the Conservancy at its Hendersonville office --telephone 828-697-5777.

Information on this article came from "Friends of State Parks", The Nature Conservancy's publication "north carolina afield" and an article by Harrison Metzger in the Times-News.

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Ecological Changes in Yellowstone National Park

The hunting habits of Yellowstone wolves have changed the ecological balance in Yellowstone National Park.

"Hiking along the small Blacktail Deer Creek trail, Douglas Smith, a wolf biologist, makes his way through a lush curtain of willows. Nearly absent for decades, willows have roared back to life in Yellowstone, and the reason, Mr. Smith believes, is that 10 years ago wolves were introduced to Yellowstone, and the park is now full of them, dispersed across 13 packs."

According to Mr. Douglas, the wolves have changed the park's ecology in many ways. One is that they have frightened the elk to high ground and away from browsing on every willow shoot by rivers and streams. "Wolves have caused atrophic cascade. They are at the top of it all here. They change the conditions for everyone else, including willows."

With the introduction of their predators and the move to higher ground, elk spend less of their time in one place and they stay away from places that could conceal wolves, such as willow thickets. Scientists have also found a large number of cottonwood saplings sprouting whereas before the only cottonwoods were 70 to 100 years old. Where cottonwoods and willows have returned, stream banks have stabilized providing shade which lowers the water temperature and makes the habitat better for trout. The result is more and bigger fish. Songbirds like the yellow warbler and Lincoln sparrow have increased where the new vegetation stands are thriving. Willow and aspen are also food for beavers and have brought them back to the streams and rivers. Where there was one beaver dam in the northern range, now there are 10.

Scientists acknowledge that probably it is not just the wolves but also climate change and flooding which have effected the vegetation. But in the meantime, the wolf studies continue.

-Excerpts and quotations from The New York Times, October 18, 2005

Woody Plants of the Southeastern United States: a Winter Guide by Ron Lance

"This is a wonderful new book for those who love woody plants," writes T. Lawrence Mellichamp, of the Department of Biology and Botanical Gardens at the University of North Carolina Charlotte. "It is unique in two ways, I think, in that it covers the entire Southeast and deals with the winter condition."

This book with its handsome cover, will interest many botany club members. Within its more than 400 pages, all the trees, shrubs, and woody ground covers that grow without aid of cultivation in the Southeast are presented. Some nine hundred plant species are described by their twig, bud and bark characteristics, almost 600 of these carefully illustrated. These include for example, more than 40 species of oaks, 24 woody hypericums, 13 pines and seven ashes.

At the beginning of the book there is an introductory narrative which covers the following: the purpose of the book, terminology and taxonomy, how to use the keys, scope, and regions covered. The morphological guide has illustrations of leaf and twig terminology and line drawings of twigs, buds, bud positioning, stipule scars and piths. There is also a glossary of the terms used in describing fruits and a section describing tree barks.

The descriptive texts are arranged alphabetically by genera rather than by family and the index at the end of the book lists species by both common and scientific name.

Ron Lance is the nursery curator at Chimney Rock Park. He has worked for twenty-five years in the fields of botany, zoology, and horticulture in such roles as instructor, specimen collector, field technician, researcher and manager of horticultural facilities. He will be our speaker at the Sammy Williams Senior Center on Friday, January 13, 2006. Ron will bring samples of twigs for us to study and he suggests that a hand lens and your favorite guidebook would be useful. He will also have handouts with illustrations of leaf and twig terminology such as the one below.

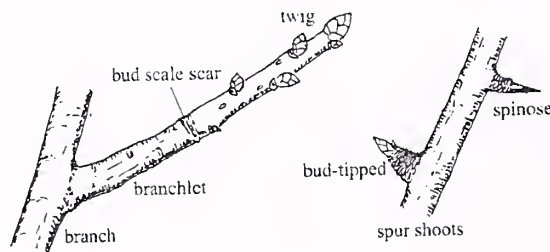


Figure G. Twig terminology

Mellichamp ends his review of the Lance book: "It is a milestone of woody plant taxonomy for the Southeast and should be on every bookshelf and in every advanced student's hand. Let's not lose the art of plant identification."

Woody Plants of the Southeastern United States was published by the University of South Carolina Press in 2004. The Mellichamp review was published in Castanea, the Journal of the Southern Appalachian Botanical Society, June 2005

-Anne Ulinski

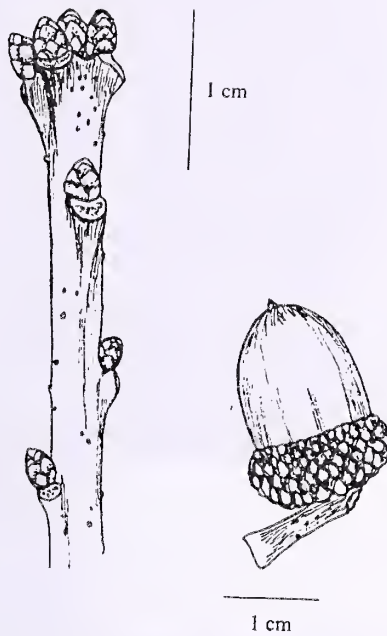


Figure 394. *Quercus alba*

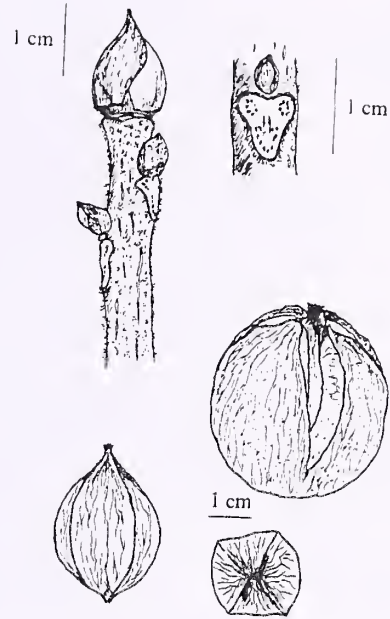


Figure 89. *Carya alba*

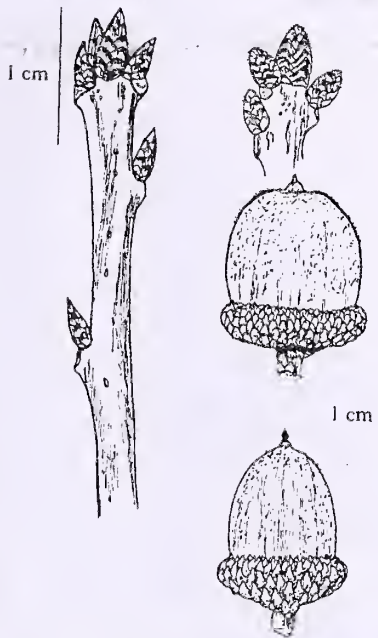


Figure 428. *Quercus rubra*

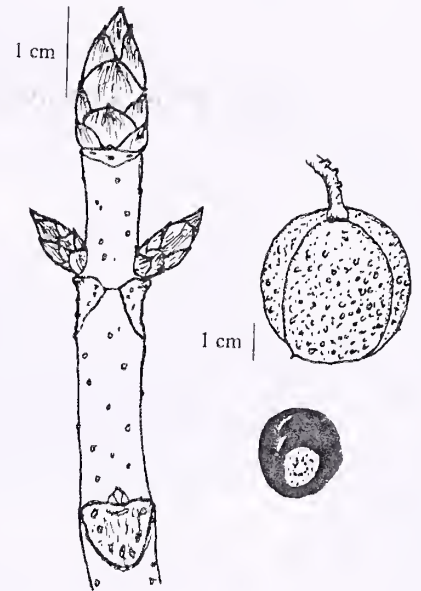


Figure 17. *Aesculus flava*

Quercus alba, White Oak
Quercus rubra, Northern Red Oak
Aesculus flava, Yellow Buckeye
Carya alba, Pignut Hickory

Illustrations from "Woody Plants of the Southeastern United States"
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